

ORAL ARGUMENT NOT YET SCHEDULED

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

No. 15-1246

SIERRA CLUB, *et al.*,
Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

Petition for Review of Final Administrative Action of the
United States Environmental Protection Agency

FINAL OPENING BRIEF OF PETITIONERS

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DATED: July 29, 2016

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Communities Against Toxics*

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

In accordance with Circuit Rule 28(a)(1), Petitioners Sierra Club and California Communities Against Toxics hereby certify as follows:

(A) Parties, Intervenors and *Amici***(i) Parties, Intervenors, and *Amici* Who Appeared in the District Court**

This case is a petition for review of final agency action, not an appeal from the ruling of a district court.

(ii) Parties to This Case**Petitioners:**

Sierra Club and California Communities Against Toxics.

Respondents:

The respondents are the U.S. Environmental Protection Agency and Gina McCarthy, in her official capacity as Administrator of the U.S. Environmental Protection Agency (collectively, “EPA”).

Movant-Intervenors:

None at present.

(iii) Amici in This Case

Coalition for Clean Air Implementation.

(iv) Circuit Rule 26.1 Disclosure for Petitioner

See disclosure form filed separately.

(B) Rulings Under Review

Petitioners challenge the EPA rule published at 80 Fed. Reg. 31,470 (June 3, 2015) and titled “Completion of Requirement to Promulgate Emissions Standards.”

(C) Related Cases

Petitioners’ counsel is aware of the following past case that is related within the meaning of Circuit Rule 28(a)(1)(C):

- *Sierra Club v. EPA*, 699 F.3d 530 (D.C. Cir. 2012).

DATED: July 29, 2016

Respectfully submitted,

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RULE 26.1 DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and D.C. Circuit Rule 26.1, Sierra Club and California Communities Against Toxics make the following disclosures:

Sierra Club

Non-Governmental Corporate Party to this Action: Sierra Club.

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party's Stock: None.

Party's General Nature and Purpose: Sierra Club, a corporation organized and existing under the laws of the State of California, is a national nonprofit organization dedicated to the protection and enjoyment of the environment.

California Communities Against Toxics

Non-Governmental Party to this Action: California Communities Against Toxics (“CCAT”).

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party’s Stock: None.

Party’s General Nature and Purpose: CCAT is a non-profit network that is a project of a non-profit corporation (Del Amo Action Committee) that is organized and existing under the laws of the State of California. It is an environmental justice network that aims to reduce exposure to pollution, to expand knowledge about the effects of toxic chemicals on human health and the environment, and to protect the most vulnerable people from harm.

DATED: July 29, 2016

Respectfully submitted,

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Pursuant to Circuit Rule 28(a)(3), the following is a glossary of acronyms and abbreviations used in this brief:

EPA	U.S. Environmental Protection Agency and Gina McCarthy, Administrator
HAP	Hazardous Air Pollutant
HCB	Hexachlorobenzene
MACT	Maximum Achievable Control Technology
MWC	Municipal Waste Combustor
PAH	Polycyclic aromatic hydrocarbon
PCBs	Polychlorinated biphenyls
POM	Polycyclic organic matter
RTC	Response to Comments (EPA-HQ-OAR-0505-0017)
RTO	Regenerative thermal oxidizer

This case challenges EPA's June 3, 2015, determination that it completed its legal obligations under Clean Air Act § 7412(c)(6), 42 U.S.C. § 7412(c)(6). EPA agrees that § 7412(c)(6) requires stringent "maximum achievable control technology" ("MACT") standards for emissions of seven extremely dangerous persistent and bioaccumulative toxic pollutants from sources that represent at least ninety percent of the emissions of those pollutants. In the determination, EPA repurposes standards for other pollutants as standards for the § 7412(c)(6) pollutants, claiming that the former are "surrogates" for the latter, and on that basis declares that § 7412(c)(6) is satisfied. Because EPA's surrogacy claims are unlawful and arbitrary, Petitioners Sierra Club and California Communities Against Toxics request vacatur of the determination.

JURISDICTIONAL STATEMENT

(A) Agency. Respondents U.S. Environmental Protection Agency and Gina McCarthy, Administrator (collectively, "EPA" or "the agency"), have jurisdiction to regulate emissions of hazardous air pollutants (also called "HAPs" or "air toxics") under Clean Air Act § 7412. 42 U.S.C. § 7412.

(B) Court of Appeals. This Court has exclusive jurisdiction to review the final EPA action challenged in this proceeding, entitled "Completion of Requirement to Promulgate Emissions Standards," 80 Fed. Reg. 31,470, JA0027 (June 3, 2015). 42 U.S.C. § 7607(b)(1).

(C) **Timeliness.** This petition for review was timely filed on July 31, 2015, within the 60-day window of 42 U.S.C. § 7607(b)(1).

STATUTES AND REGULATIONS

Pertinent statutes and regulations are in a separate addendum.

STATEMENT OF ISSUES

1. Whether EPA's determination that it has set MACT standards for emissions of three persistent and bioaccumulative hazardous air pollutants through "surrogates" is unlawful or arbitrary where the standards do not purport to satisfy the stringency requirements of § 7412(d)(2)-(3) of the Clean Air Act, 42 U.S.C. § 7412(d)(2)-(3).
2. Whether EPA's determination that it has set MACT standards for these pollutants through "surrogates" is unlawful or arbitrary where the standards fail the test for surrogacy under the Clean Air Act.
3. Whether EPA's determination that it has set MACT standards for these pollutants through "surrogates" is unlawful or arbitrary where EPA refused to address comments identifying legal and technical flaws in the proposed surrogacy determinations.

STATEMENT OF FACTS

I. FACTUAL BACKGROUND.

The three hazardous air pollutants at issue in this case are polychlorinated biphenyls (“PCBs”), polycyclic organic matter (“POM”), and hexachlorobenzene (“HCB”). These pollutants are especially harmful to human health and the environment because they are persistent, bioaccumulative toxics, meaning that they do not break down in the environment but bioaccumulate in biota, increasing in concentration as they progress up the food chain. *See* S. Rep. No. 101-228, at 154-55 (1989), *reprinted in* 5 Comm. on Env’t and Pub. Works, 103rd Cong., A Legislative History of the Clean Air Act Amendments of 1990 at 8494-95 (1993) (“Legislative History”). Air pollution is the primary route through which these pollutants are deposited into the environment, where they are already present at levels that can adversely affect ecological and human health. *Id.*; EPA, EPA-453/R-00-005, *Deposition of Air Pollutants to the Great Waters: Third Report to Congress* at v, JA0345 (June 2000).

All three pollutants are at least probable human carcinogens, linked particularly to liver and kidney tumors.¹ Exposure can also cause damage to the

¹ EPA, *Polychlorinated biphenyls (PCBs)*; CASRN 1336-36-3 at 6, JA0282 (Oct. 1996), *available at* http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0294_summary.pdf (“EPA, IRIS: PCBs”); 71 Fed. Reg. 43,906, 43,922/2, JA0220 (Aug. 2, 2006); 76

immune system, neurological system, and reproductive system, and other serious health problems.² PCBs and HCB become concentrated in breast milk, making them particularly dangerous to nursing infants.³

PCBs are linked to liver tumors.⁴ They can also cause skin problems, like chloracne; damage to the immune system; neurodevelopmental damage to exposed infants; and other health problems.⁵ PCBs are especially toxic when eaten. 72 Fed. Reg. 53,152, 53,153/2, JA0238 (Sept. 18, 2007); *see* EPA, IRIS: PCBs at 10, JA0286 (“Highly exposed populations include some nursing infants and consumers of game fish, game animals, or products of animals contaminated through the food

Fed. Reg. 57,106, 57,308/3, JA0255 (Sept. 15, 2011); EPA, *Polycyclic Organic Matter (POM)* at 1, JA0396, <https://www3.epa.gov/airtoxics/hlthef/polycycl.html> (last updated Feb. 23, 2016).

² EPA, *Polychlorinated Biphenyls (PCBs): Health Effects of PCBs*, JA0403, <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs#healtheffects> (last updated Mar. 21, 2016); 71 Fed. Reg. at 43,922/2, JA0220; EPA, *Hexachlorobenzene*; CASRN 118-74-1, JA0262, *available at* http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0374_summary.pdf; 76 Fed. Reg. at 57,308/3-09/1, JA0255-56.

³ *See* U.S. Dept. of Health and Human Services (“DHHS”), Agency for Toxic Substances and Disease Registry (“ATSDR”), *Toxicological Profile for Polychlorinated Biphenyls (PCBs)* at 7-9, JA0351-53 (Nov. 2000), *available at* <http://www.atsdr.cdc.gov/toxprofiles/tp17.pdf>; EPA, *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories Vol.2* at 5-60, JA0349 (2000), *available at* <https://www.epa.gov/sites/production/files/2015-01/documents/fish-volume2.pdf>.

⁴ EPA, IRIS: PCBs at 2, 6, JA0278, 0282.

⁵ *Polychlorinated Biphenyls (PCBs): Health Effects of PCBs*, JA0403.

chain.”). PCBs tend to accumulate in fatty tissues; as a result, public authorities may ban or warn against eating fish caught in PCB-contaminated waters. *E.g.*, H.R. Rep. No. 101-490, Pt. 1, at 320 (1990), *reprinted in* 2 Legislative History at 3344. Four states have statewide freshwater advisories for PCBs, and nine states have PCB advisories for their coastal waters.⁶ PCBs can form as a result of combustion, and are also released when PCB-containing materials are burned, *see* 74 Fed. Reg. 51,368, 51,390/3-91/1, JA0240-41 (Oct. 6, 2009) .⁷

As defined in the Clean Air Act, 42 U.S.C. § 7412(b)(1) & n.4, POM consists of a range of chemical compounds, including polycyclic aromatic hydrocarbons (“PAH”) such as naphthalene. 76 Fed. Reg. at 57,308/3, JA0255. PAH and naphthalene are at least probable human carcinogens. *Id.* at 57,308/3-09/1, JA0255-56. POM can also cause skin problems and may affect reproduction and child development. *Id.* at 57,308/3, JA0255; Polycyclic Organic Matter (POM), JA0396. POM typically results from combustion. Petroleum refineries, coke ovens, and aerospace facilities are significant sources of POM emissions. 67

⁶ EPA, *Nat’l Listing of Fish Advisories: General Fact Sheet 2011*, JA0382 (Dec. 2013), <https://www.epa.gov/fish-tech/national-listing-fish-advisories-general-fact-sheet-2011> (last updated Oct. 6, 2015).

⁷ *See also* EPA, *Learn about Polychlorinated Biphenyls (PCBs): Release and Exposure of PCBs*, JA0399, <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs> (last updated Mar. 21, 2016) (discussing ways that PCBs are released and that people are exposed to them).

Fed. Reg. 68,124, 68,126-27 tbl.1, JA0195-96 (Nov. 8, 2002). More than 6600 kilograms of PAH—just one component of POM—are deposited each year into Lake Michigan alone.⁸

HCB primarily harms the liver, causing both liver damage and liver tumors, and also causes kidney tumors. 71 Fed. Reg. at 43,922/2, JA0220. The liver problems can also be accompanied by neurological effects. *Id.* Skin lesions may also occur.⁹ People are predominantly exposed to HCB by eating foods, like fish, that become contaminated because they inhabit contaminated environments. 65 Fed. Reg. 77,026, 77,028/1-2, JA0189 (Dec. 8, 2000). HCB is also toxic when inhaled or absorbed through the skin. *Id.* at 77,028/1, JA0189. HCB is not purposefully manufactured, but is a byproduct of chemical manufacturing processes and production of several pesticides. *Id.* It is likely that the general population is exposed to HCB, at least at low levels.¹⁰

⁸ *Deposition of Air Pollutants to the Great Waters* at II-37, JA0347.

⁹ EPA, *Hexachlorobenzene: Health Hazard Information*, JA0393, <https://www3.epa.gov/airtoxics/hlthef/hexa-ben.html> (last updated Feb. 23, 2016).

¹⁰ DHHS, ATSDR, *Draft Toxicological Profile for Hexachlorobenzene* at 9, JA0374 (June 2013), available at <http://www.atsdr.cdc.gov/toxprofiles/tp90.pdf>.

II. STATUTORY BACKGROUND.

A. Clean Air Act.

One major objective of the Clean Air Act Amendments of 1990 was to remedy EPA's decades-long failure to adequately regulate hazardous air pollutants. S. Rep. No. 101-228, at 127-29, 154-55, *reprinted in* 5 Legislative History at 8467-69, 8494-95. *See also* H.R. Rep. No. 101-490 Pt.1, at 150-54, *reprinted in* 2 Legislative History at 3174-78. Congress was particularly troubled by the dangers posed by persistent bioaccumulative hazardous air pollutants:

Many of the pollutants of greatest concern bioaccumulate in fish and organisms higher up the food chain. To illustrate the extent to which contaminant concentrations can be magnified, consumption of a single one-pound serving of fish contaminated with PCBs at five parts per million delivers as much PCBs as one would ingest by drinking Great Lakes water for 1000 years. Once ingested, PCBs and other toxic chemicals can be passed across the placenta and in breast milk to fetuses and nursing infants This legislation requires protection of the environment from these pollutants.

S. Rep. No. 101-228, at 154-55, *reprinted in* 5 Legislative History at 8494-95.

The Act generally requires § 7412(d)(2)-(3) MACT standards only for “major” sources of hazardous air pollutants—those with the potential to emit 10 tons or more of any single hazardous air pollutant, or 25 tons or more of any combination of hazardous air pollutants. 42 U.S.C. § 7412(a)(1) (defining major source); (c)(1) (requiring listing of all categories of major sources); (c)(2), (d)(1)-(2) (requiring § 7412(d)(2) standards for listed categories). For “area” sources

(those that are not “major,” 42 U.S.C. § 7412(a)(2)), § 7412 generally allows EPA to issue less-stringent “generally available control technology” standards under § 7412(d)(5). *Id.* § 7412(d)(5).

But for the persistent and bioaccumulative hazardous air pollutants enumerated in § 7412(c)(6), Congress crafted an exception. Section 7412(c)(6) provides

With respect to alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzofurans and 2,3,7,8-tetrachlorodibenzo-p-dioxin, the Administrator shall, not later than 5 years after November 15, 1990, list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsections (d)(2) or (d)(4) of this section. Such standards shall be promulgated not later than 10 years after November 15, 1990.

Id. § 7412(c)(6). Thus, the Act required EPA to list source categories accounting for 90 percent of the aggregate emissions of these pollutants by 1995, and to promulgate standards under § 7412(d)(2) or (d)(4) for all source categories listed under § 7412(c)(6), whether they are categories of major sources, area sources, or both, by 2000.

This Court has held that, when EPA sets § 7412(d)(2) standards for any category of major sources of hazardous air pollutants, the Act unambiguously requires the agency to set emission standards for each hazardous air pollutant that category emits. *Nat’l Lime Ass’n v. EPA*, 233 F.3d 625, 633-34 (D.C. Cir. 2000).

After that decision by this Court, EPA considered the question for area sources and determined that § 7412(c)(6) is “ambiguous as to whether standards for listed source categories must address all HAP or only the section [7412](c)(6) HAP for which the source category was listed.” 76 Fed. Reg. 9450, 9457/1, JA0244 (Feb. 17, 2011) (emphasis added). Then, reasoning that § 7412(c)(6) “is obviously intended to ensure controls for specific persistent, bioaccumulative HAP,” EPA selected the latter interpretation—that it must set standards under § 7412(d)(2) for “the HAP for which a source category is listed under section [7412](c)(6).” *Id.* at 9457/2, JA0244. *See also* 76 Fed. Reg. 15,554, 15,567/2-3, JA0250 (Mar. 21, 2011) (same). This Court upheld that interpretation as reasonable, *Desert Citizens Against Pollution v. EPA*, 699 F.3d 524, 527-28 (D.C. Cir. 2012)¹¹, and EPA has not purported to change it since. In short, it is undisputed that § 7412(c)(6) requires EPA to assure that all sources listed pursuant to § 7412(c)(6)—whether they are major sources or area sources—are subject to § 7412(d)(2) MACT standards for at least the § 7412(c)(6) pollutants for which they were listed.¹²

¹¹ The only other plausible interpretation noted by the Court is that EPA must set § 7412(d)(2) standards for all the hazardous air pollutants emitted by sources listed under § 7412(c)(6). *Desert Citizens*, 699 F.3d at 528.

¹² In the rule under review, EPA states that § 7412(c)(6)’s requirement of MACT standards for the named pollutants is “redundant” as to major sources because other Clean Air Act provisions independently require MACT standards for each

MACT standards must require the “maximum” degree of reduction in emissions that is “achievable” considering cost and other factors. *Id.* § 7412(d)(2); *Sierra Club v. EPA*, 479 F.3d 875, 877 (D.C. Cir. 2007). In addition, MACT standards must be no “less stringent than the emission control that is achieved in practice by the best controlled similar source” (for new sources) and no less stringent than the “average emission limitation achieved by the best performing 12 percent of sources” (for existing sources). 42 U.S.C. § 7412(d)(3). These minimum stringency requirements unambiguously “require[] floors based on the emission level actually achieved by the best performers (those with the lowest emission levels).” *Sierra Club*, 479 F.3d at 880-81.

This Court has addressed the circumstances under which EPA may lawfully set MACT standards through a designated “surrogate pollutant,” rather than setting MACT standards that apply to the target pollutant directly. EPA may use surrogates “if it is ‘reasonable’ to do so,” *Sierra Club v. EPA*, 353 F.3d 976, 984 (D.C. Cir. 2004), but, to be reasonable, the surrogate must enable EPA to identify the “best achieving sources, and what they can achieve,” with respect to the target pollutant. *Id.* at 985. *See* 42 U.S.C. § 7412(d)(2)-(3).

hazardous air pollutant emitted by a major source. 80 Fed. Reg. at 31,478/1, JA0035. But EPA does not deny that this is what § 7412(c)(6) requires.

In two cases considering claims by EPA that particulate matter is a reasonable surrogate for metallic hazardous air pollutants, this Court “established a three-part analysis for determining whether the use of PM as a surrogate for HAPs is reasonable.” *Sierra Club*, 353 F.3d at 984 (interpreting *Nat’l Lime Ass’n v. EPA*, 233 F.3d at 636-39 (D.C. Cir. 2000), *as amended on denial of reh’g* (D.C. Cir. 2001)). First, the target pollutant must be “invariably present in” the surrogate, such that each unit of emissions of the surrogate avoided “‘carries’ within it some quantum of” the target pollutant. *Nat’l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 984. Second, technologies for controlling the claimed surrogate must “indiscriminately capture[]” the target pollutant. *Nat’l Lime*, 233 F.3d at 639. Third, controlling the surrogate must be “the only means” by which facilities achieve reductions in the target. *Id.* If sources can control the surrogate by other means, such as through changes in inputs, then “EPA must also assure itself that fuels and other inputs affect [the target pollutant] in the same fashion that they affect the [surrogate].” *Id.* EPA may forego the task of “quantif[ying the] correlation” between the target pollutant and claimed surrogate and “assess[ing] its variability” if all three parts of the above analysis are met. *Id.*; *accord Sierra Club*, 353 F.3d at 984.

A third case, *Mossville Environmental Action Now v. EPA*, evaluated a claim by EPA that a different pollutant—vinyl chloride—was a reasonable surrogate for

several hazardous air pollutants emitted from PVC production facilities. 370 F.3d 1232 (D.C. Cir. 2004). Because the record did not disclose (1) “which of the HAPs” were correlated with vinyl chloride or (2) “to what degree,” the Court rejected EPA’s surrogacy claims and vacated the rule, *id.* at 1243, without engaging in further analysis of the three-part test applied in *National Lime* and *Sierra Club*. *See id.* (“We cannot review under any standard the adequacy of the EPA’s correlation determination if we do not know what correlation the EPA found to exist.”).

B. Administrative Procedure Act.

Because the EPA final action at issue here is not governed by Clean Air Act § 7607(d), it is subject to the procedural requirements set forth in § 553 of the Administrative Procedure Act (APA), 5 U.S.C § 553. *Sierra Club v. EPA*, 699 F.3d 530, 534-35 (D.C. Cir. 2012). EPA was required to “give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments,” and required to “consider[] the relevant matter presented.” 5 U.S.C. § 553(c).

III. REGULATORY BACKGROUND.

A. EPA's Failure To Assure That Source Categories Accounting For Ninety Percent Of The Aggregate Emissions Of The § 7412(c)(6) Pollutants Are Subject To Standards.

Although the Clean Air Act required EPA to issue its § 7412(c)(6) list no later than November 15, 1995, 42 U.S.C. § 7412(c)(6), the agency did not issue a final list until 1998. 63 Fed. Reg. 17,838, JA0165 (Apr. 10, 1998). By that time, the agency already had issued rules for several of the source categories that, it would later claim, account for significant percentages of one or more of the § 7412(c)(6) pollutants. Those rules covered the following source categories:

- Coke ovens, 54 Fed. Reg. 38,044 (Sept. 14, 1989) & 58 Fed. Reg. 57,898 (Oct. 27, 1993). EPA claims that coke oven byproduct recovery and charging, topside, and door leaks together account for approximately eight percent of all POM emissions. 79 Fed. Reg. 74,656, 74,662, tbl.1, JA0007 (Dec. 16, 2014).¹³

¹³ In its 1998 listing, EPA reports POM emissions using three measures: (1) “extractable organic matter (EOM)”; (2) “the sum of seven polynuclear aromatic hydrocarbon compounds that are probably carcinogens (7-PAH)”; and (3) “the sum of the sixteen PAHs measured in EPA test method 610 (16-PAH).” 63 Fed. Reg. at 17,842/2, JA0169. In its proposal for the determination at issue here, however, EPA announces, “we decided to use only the 16-PAH baseline inventory for determining the 90 percent threshold for POM under section [7412](c)(6).” 79 Fed. Reg. at 74,672/3-73/1, JA0017-18.

- Synthetic Organic Chemical Manufacturing Industry (“Chemical Plants”), 59 Fed. Reg. 19,402, JA0157 (Apr. 22, 1994). EPA claims that chlorinated solvents production accounts for more than fifty-five percent of all HCB emissions and that industrial organic chemicals manufacturing, naphthalene production, and phthalic anhydride production together account for more than three percent of all POM emissions. 79 Fed. Reg. at 74,661-64, tbl.1, JA0006-09.¹⁴
- Aerospace manufacturing and rework facilities (“aerospace facilities”), 60 Fed. Reg. 45,948 (Sept. 1, 1995). EPA claims that aerospace facilities account for more than twenty percent of all POM emissions. 79 Fed. Reg. at 74,661, tbl.1, JA0006.
- Petroleum refineries, 60 Fed. Reg. 43,244 (Aug. 18, 1995). EPA claims that petroleum refineries account for more than thirteen percent of all POM emissions. 79 Fed. Reg. at 74,664, tbl.1, JA0009.
- Wood household furniture manufacturing, 60 Fed. Reg. 62,930 (Dec. 7, 1995). EPA claims that wood household furniture manufacturing

¹⁴ Chlorinated solvents production facilities, industrial organic chemicals manufacturing facilities, naphthalene production facilities, and phthalic anhydride production facilities are subject to the rule governing chemical plants. 80 Fed. Reg. 31,470, 31,472-75, tbl.1, JA0027, 0029-32 (listing 59 Fed. Reg. 19,402, JA0157, as the rule governing each).

accounts for .1 percent of all POM. 79 Fed. Reg. at 74,664-65, tbl.1, JA0009-10.

- Ship building and repair, 60 Fed. Reg. 64,330 (Dec. 15, 1995). EPA claims that ship building and repair accounts for .2 percent of all POM. 79 Fed. Reg. at 74,664, tbl.1, JA0009.
- Municipal waste combustors (“MWC”), 60 Fed. Reg. 65,387 (Dec. 19, 1995). EPA claims that MWC account for more than fifty-one percent of all PCB emissions. 79 Fed. Reg. at 74,663, tbl.1, JA0008.
- Commercial Printing, 61 Fed. Reg. 27,132 (May 30, 1996). EPA claims that commercial printing accounts for .4 percent of all POM. 79 Fed. Reg. at 74,662, tbl.1, JA0007.

None of these rules established emissions standards for the relevant § 7412(c)(6) pollutants or designated surrogates for them. None of them even mention § 7412(c)(6), far less address the agency’s obligations under that provision.

EPA claims that the § 7412(c)(6) list, including the underlying inventory of emissions of the § 7412(c)(6) pollutants, is “subject to to change.” 79 Fed. Reg. at 74,659/2, JA0004 (quoting 63 Fed. Reg. at 17,846/1, JA0173). Indeed, the § 7412(c)(6) inventory has been repeatedly altered, up to and including in the 2015 determination challenged here, with many source categories added and removed.

E.g., 67 Fed. Reg. at 68,125/1-26/1, JA0194-95 (removing area-source asphalt hot-mix production, fabricated metal products, paint and allied products, coated and laminated paper and packaging, transportation equipment manufacturing, tire manufacturing, and open burning of scrap tires and adding gasoline distribution stage one); 79 Fed. Reg. at 74,672/1, JA0017 (removing gasoline distribution (aviation)); 76 Fed. Reg. at 15,556/2, JA0248 (removing oil- and biomass-fired boilers).

After EPA published its initial § 7412(c)(6) listing in 1998, the agency continued to issue rules for source categories that emit large quantities of § 7412(c)(6) pollutants:

- In 1998, EPA issued standards for pulp and paper mills. 63 Fed. Reg. 18,504 (Apr. 15, 1998). EPA claims that these facilities account for more than ten percent of all POM emissions. 79 Fed. Reg. at 74,664, tbl.1, JA0009.
- In 1999, EPA issued standards for pesticide manufacturing. 64 Fed. Reg. 33,550 (June 23, 1999). EPA claims that these facilities account for more than forty-four percent of all HCB emissions. 79 Fed. Reg. at 74,664, tbl.1, JA0009.
- In 2002, EPA issued standards for catalytic cracking units, catalytic reforming units, and sulfur recovery units at petroleum refineries. 67

Fed. Reg. 17,762 (Apr. 11, 2002). EPA claims that these processes contribute to the POM emissions from petroleum refineries, which in total account for more than thirteen percent of all POM emissions. 79 Fed. Reg. at 74,664, tbl.1, JA0009.

- In 2002, EPA issued standards for coated and laminated paper and packaging. 67 Fed. Reg. 72,330 (Dec. 4, 2002). EPA claims that these facilities account for .7 percent of all POM emissions. 79 Fed. Reg. at 74,663-64, tbl.1, JA0008-09.
- In 2003, EPA issued standards for pushing, quenching, and battery stacks at coke ovens. 68 Fed. Reg. 18,008 (Apr. 14, 2003). EPA claims that these coke oven processes account for more than six percent of all POM emissions. 79 Fed. Reg. at 74,662, tbl.1, JA0007.
- In 2003, EPA issued standards for asphalt roofing production. 68 Fed. Reg. 24,562 (May 7, 2003). EPA claims that these facilities account for .5 percent of all POM emissions. 79 Fed. Reg. at 74,661, tbl.1, JA0006.
- In 2003, EPA issued standards for paint and allied products. 68 Fed. Reg. 63,852 (Nov. 10, 2003). EPA claims that these facilities account for .3 percent of all POM emissions. 79 Fed. Reg. at 74,663, tbl.1, JA0008.

- In 2004, EPA issued standards for fabricated metal products. 69 Fed. Reg. 130 (Jan. 2, 2004). EPA claims that these facilities account for more than one percent of all POM emissions. 79 Fed. Reg. at 74,663, tbl.1, JA0008.
- In 2004, EPA issued standards for transportation equipment manufacturing. 69 Fed. Reg. 20,968 (Apr. 19, 2004) & 69 Fed. Reg. 22,602 (Apr. 26, 2004). EPA claims that these facilities account for .5 percent of all POM emissions. 79 Fed. Reg. at 74,664, tbl.1, JA0009.
- In 2004, EPA issued standards for reciprocating internal combustion engines. 69 Fed. Reg. 33,474 (June 15, 2004). EPA claims that these facilities account for .4 percent of all POM emissions. 79 Fed. Reg. at 74,663, tbl.1, JA0008.

The source categories covered by the rules listed above, issued between 1989 and 2004, are responsible for 100 percent of total HCB emissions, over 65 percent of total POM emissions, and over 51 percent of PCB emissions. These rules fail to set standards for the § 7412(c)(6) pollutants for which the source categories are listed under that provision or designate surrogates for them and, with only one exception, do not otherwise purport to satisfy § 7412(c)(6).¹⁵

¹⁵ The exception is the large municipal waste combustors rule. There, EPA did not set MACT standards for the § 7412(c)(6) pollutants or designate surrogates for

IV. PRIOR LITIGATION.

A. Challenges To EPA's Implementation Of § 7412(c)(6).

After EPA failed to issue standards for the source categories it listed under § 7412(c)(6) by November 15, 2000—as § 7412(c)(6) required the agency to do, 42 U.S.C. § 7412(c)(6)—Sierra Club filed a deadline suit in district court. *Sierra Club v. McCarthy*, No. 01-1558 (D.D.C. filed July 18, 2001).¹⁶ In that case, EPA argued that the question of whether EPA had set the standards required by § 7412(c)(6) should be resolved in a petition for review of a future notice in which the agency “explain[ed] how it has satisfied the requirements of section [7412](c)(6) in terms of issuing emission standards for the source categories that account for the statutory thresholds identified in section [7412](c)(6).” Mem. In Support Of Defendant’s Cross Motion For Summary Judgment On Remedy at 19 n.16, JA0131, *Sierra Club v. McCarthy*, No. 01-1537 (D.D.C. June 13, 2005) (“Def. Opp.”). The agency represented to the district court that this notice, “like any other final action under the [Clean Air Act], would be subject to judicial review in the D.C. Circuit pursuant to [Clean Air Act] section [7607](b).” *Id.*

them, but still claimed that § 7412(c)(6) was satisfied. 70 Fed. Reg. 75,348, 75,356/1-2, JA0218 (Dec. 19, 2005). *See infra* at 54-56.

¹⁶ That case was consolidated with other deadline cases under *Sierra Club v. Whitman*, No. 01-1537 (D.D.C. filed July 16, 2001). The consolidated cases are now captioned *Sierra Club v. McCarthy*, and this brief refers to them accordingly.

Agreeing with EPA, the district court set a remedial deadline for EPA to complete its obligations under § 7412(c)(6), but declined to order EPA to set the standards required by that provision, finding that the D.C. Circuit “is the exclusive forum for substantive review of EPA regulations promulgated under Section [7412] of the Clean Air Act.” *Sierra Club v. McCarthy*, 444 F. Supp. 2d 46, 60 (D.D.C. 2006). *See also id.* at 59 (noting EPA’s representation that it would “issue a notice that explains how it has satisfied the requirements of section [7412](c)(6)”) (citing Def. Opp. at 19 n.16, JA0131).

On March 21, 2011, EPA published, with no prior notice or opportunity for comment, a determination that it had “completed sufficient standards to meet the 90 percent requirement” under § 7412(c)(6). 76 Fed. Reg. 15,308, 15,308/3, JA0245 (Mar. 21, 2011). EPA did not explain how it believed it could satisfy the statute without setting standards for emissions of POM, HCB, or PCBs from sources listed under § 7412(c)(6) for their emissions of those pollutants.

Sierra Club filed a petition in this Court challenging the determination as unlawful and arbitrary. *See Sierra Club*, 699 F.3d at 531. Despite its representation to the U.S. District Court that its determination would be reviewable in this Court, EPA argued that Sierra Club’s petition for review was an “untimely collateral attack” on previous rules for the source categories at issue, most of which had issued years or decades earlier. Final Brief for Respondents at 27-29, JA0138-40,

Sierra Club v. EPA, 699 F.3d 530 (D.C. Cir. May 18, 2012) (“Respondents’ Brief”); *id.* at 32-33, JA0143-44 (“belated, backdoor challenge” is “improper and untimely”). EPA also argued that it had no obligation to provide notice or take public comment because the determination was nothing more than a mathematical “accounting” that “left the world just as it found it.” *Id.* at 50-51, 54, JA0150-51, 0154.

This Court considered each of these arguments and rejected them. Rejecting EPA’s attempt to characterize the suit as a “back door for attacking long past rulemakings,” the Court explained that Sierra Club’s actual argument was that EPA was “unlawfully shoehorning previous rulemakings into the service of its argument that it had completed its obligations under § [7412](c)(6) in part because some of these previous regulations did not, on their face, purport to carry out that paragraph’s demands.” *Sierra Club*, 699 F.3d at 533-34. That claim, the Court held, was timely. *Id.* Rejecting EPA’s argument that the determination was a mere mathematical accounting, the Court held that that the determination “tread new ground by taking previous rulemakings—which EPA had promulgated without any evident goal of satisfying its § [7412](c)(6) obligations—and repurposing them to satisfy § [7412](c)(6).” *Id.* at 535. For that reason, the Court held the determination was “subject to [5 U.S.C.] § 553’s notice-and-comment requirements.” *Id.* The Court vacated the notice based on the procedural violation without reaching Sierra

Club's substantive claims. *Id.* The Court stated, "our vacatur will require EPA, consistent with the district court's deadline order, to entertain and respond to the Club's claims about the necessary scope and stringency of the standards." *Id.* at 533.

Following this Court's decision, Sierra Club invited EPA to discuss a schedule for promulgation of standards for the remaining sources of POM, HCB, and PCBs. In a phone conversation on April 17, 2013, counsel for EPA informed Sierra Club that EPA did not intend to take any further action in fulfillment of its obligations under § 7412(c)(6). *See Sierra Club v. McCarthy*, 61 F. Supp. 3d 35, 38-39 (D.D.C. 2014).

Thus, Sierra Club was forced to return once again to district court to enforce § 7412(c)(6) and that court's still-unfulfilled deadline orders. EPA once again opposed Sierra Club's motion to enforce on jurisdictional grounds, arguing that the only avenue for Sierra Club to enforce EPA's still-unmet mandatory duties under § 7412(c)(6) was to submit an *Oljato* petition requesting discretionary reopening of old rules. EPA Opp. at 2, JA0156, *Sierra Club v. McCarthy*, No. 01-1537 (D.D.C. Sept. 13, 2013). The district court rejected EPA's jurisdictional argument, determined that its outstanding deadline orders were still unfulfilled, and ordered EPA to conduct a new notice-and-comment rulemaking to determine whether § 7412(c)(6) has been satisfied. *Sierra Club*, 61 F. Supp. 3d at 41.

B. Challenges To Specific Rules In Which EPA Refused To Set Standards For § 7412(c)(6) Pollutants.

In addition to seeking judicial review of EPA's failure to satisfy the programmatic obligation to set standards for emissions of the § 7412(c)(6) pollutants from sources that represent ninety percent of their aggregate emissions, Sierra Club has also challenged specific rules in which the agency failed to set standards for the § 7412(c)(6) pollutants.

After EPA announced in its 1998 listing that municipal waste combustors (MWC) account for more than fifty-one percent of all PCB emissions, the agency issued a rule for MWC in 2000 that did not include standards for PCBs. Sierra Club challenged that rule in *Sierra Club v. EPA*, No. 01-1054 (D.C. Cir. filed Feb. 5, 2001).¹⁷ In 2003, Sierra Club and EPA agreed to address the agency's failure to set PCB standards in the district court deadline suit (*Sierra Club v. McCarthy*, No. 01-1537) or future litigation rather than litigating it in this Court. Reply Brief of Petitioners Sierra Club and New York Public Interest Group at 17, JA0127, *Ne. Md. Waste Disposal Auth. v. EPA*, 358 F.3d 936 (D.C. Cir. Sept. 22, 2003). Thus, although this Court granted Sierra Club's petition for review of the 2000 MWC

¹⁷ This challenge was consolidated with other petitions for review and decided in *Northeast Maryland Waste Disposal Authority v. EPA*, 358 F.3d 936 (D.C. Cir. 2004).

rule, *Ne. Md.*, 358 F.3d at 953-55, its decision did not address EPA's failure to set standards for PCBs.

Sierra Club also sought to challenge EPA's failure to set PCB standards when the agency issued court-ordered revisions of its emission standards for large MWC, having raised this objection during the comment period for that rule.

Petition for Review, JA0132, *Sierra Club v. EPA*, No. 06-1250 (D.C. Cir. filed July 7, 2006). EPA obtained a voluntary remand of the challenged rules before briefing commenced, Order, JA0136, *Sierra Club v. EPA*, No. 06-1250 (D.C. Cir. Feb. 15, 2008), however, and still has not responded to the Court's remand order, seven years later.

V. EPA'S § 7412(c)(6) DETERMINATION.

A. Proposed Rule.

On December 16, 2014, EPA issued another proposed determination that it had completed its obligations under § 7412(c)(6). 79 Fed. Reg. 74,656, JA0001.

The proposal contains several changes to the 90-percent inventory, *id.* at 74,671/1-74/3, JA0016-19, followed by EPA's claim to have set all required standards by one of "two approaches": (1) through MACT standards that "directly regulate[]" the § 7412(c)(6) pollutant or (2) through MACT standards for another pollutant or compound "which serves as a surrogate for the targeted" § 7412(c)(6)

pollutant. *Id.* at 74,677/1-3, JA0022 (citing *Nat’l Lime*, 233 F.3d at 637, & *Sierra Club*, 353 F.3d at 982-85).

For four source categories—hazardous waste combustors, medical waste incinerators, boilers and process heaters, and large MWC—EPA claims in the proposal that it designated surrogates for emissions of the § 7412(c)(6) pollutants and “explained ... the surrogacy relationship” in a prior notice and comment rulemaking. *Id.* at 74,677/3-78/1, JA0022-23. For all of the remaining sources, EPA acknowledges that it did not explain the surrogacy relationship in prior rules and promises to “explain[] below” that the § 7412(c)(6) pollutants are subject to standards through surrogates that “are reasonable.” *Id.*¹⁸

For every source category for which it had not previously set a MACT standard or designated a surrogate, EPA proposes to determine that pollutants already regulated are surrogates for the § 7412(c)(6) pollutants for which standards are required. Specifically:

- For coke ovens, EPA claims that “visible emissions” are a surrogate for POM, *id.* at 74,678/1-2, JA0023;

¹⁸ In fact, the prior rules did not just fail to “explain” the surrogacy relationships. The rules did not purport to designate surrogates for the § 7412(c)(6) pollutants at all. *Supra* at 13-18.

- For chemical plants, EPA claims that “organic HAP” is a surrogate for both POM and HCB, *id.* at 74,679/1-2, 74,680/1-2, JA0024-25;
- For pesticides manufacturing, EPA claims that both “total carbon” and “organic HAP” are surrogates for HCB, *id.* at 74,680/2, JA0025
- For naphthalene production, EPA claims that “organic HAP” is a surrogate for POM, *id.* at 74,679/1-2, JA0024;
- For petroleum refineries, EPA claims that “organic carbon” is a surrogate for POM, *id.* at 74,679/2-3, JA0024;
- For asphalt roofing manufacturing, EPA claims that “total hydrocarbons” is a surrogate for POM, *id.* at 74,679/3, JA0024;
- For reciprocating internal combustion engines, EPA claims that “carbon monoxide” is a surrogate for POM, *id.*;
- For aerospace coatings, EPA claims that “total HAP” is a surrogate for POM, *id.* at 74,678/2-3, JA0023;
- For eight other surface coating industries (fabricated metal products manufacturing, miscellaneous metal parts, laminated paper and packages, paint and allied products, wood household furniture manufacturing, transportation equipment manufacturing, ship building and repair, and commercial printing), EPA claims that “organic HAP” is a surrogate for POM, *id.* at 74,678/3, JA0023; and

- For pulp and paper kraft recovery furnaces and pulp and paper lime kilns, EPA claims that “organic HAP” is a surrogate for POM, *id.* at 74,679/1, JA0024.

EPA requested comment on these new proposed surrogacy determinations, but not on the surrogates it claimed to have designated in prior rules (for hazardous waste combustors, medical waste incinerators, boilers and process heaters, and large MWC). *Id.* at 74,656/2, 74,678/1, JA0001, 0023.

B. Sierra Club’s Comments.

Sierra Club submitted legal and technical comments explaining that EPA’s proposed surrogates are not reasonable because they do not enable EPA to identify the best performers, and what they can achieve, with respect to the § 7412(c)(6) pollutants. EPA-HQ-OAR-2004-0505-0014, JA0039 (“Comments”); EPA-HQ-OAR-2004-0505-0015, JA0079 (“Supplemental Comments”).

The comments note that EPA did not establish an adequate correlation between the § 7412(c)(6) pollutants and the claimed surrogates, either by satisfying the three-part analysis of *National Lime* or otherwise. *See* Comments, JA0039. The comments point out that POM, PCBs, and HCB are not consistently correlated with any of EPA’s purported surrogates. *Id.* at 3-16, JA0041-54. For coke ovens, the comments note that, because POM from coke ovens is often a gas, not a visible particulate, measuring and controlling “visible emissions” fails to measure and

control POM. *Id.* at 5, JA0043. They further note that particulate control devices, used by coke ovens to control visible emissions, will not reduce gaseous POM or will reduce it far less, while technologies like carbon adsorption, which would reduce gaseous POM, will not be used under a standard that regulates only visible emissions. *Id.* at 5 & Ex. A pp.2-3, JA0043, 0057-58.

The comments point out that no record evidence supports the claim (which EPA made for six source categories¹⁹) that combustion controls will reduce POM and HCB “indiscriminately” or “equally” with other pollutants. *Id.* at 7-16, JA0045-54. The comments explain that, for refineries, pulp and paper mills, chemical plants, asphalt roofing manufacturing, and reciprocating internal combustion engines, the combustion conditions that result in low emissions of the claimed surrogates do not necessarily result in low emissions of the target § 7412(c)(6) pollutants, because “different combustion conditions actually favor different emissions.” *Id.* at 8, 10-11, 13 & Ex. A pp.5-9 & Ex. B, JA0046, 0048-49, 0051, 0060-64, 0066. *See also id.* at 13 & Ex. A p.8, JA0051, 0063 (“gaseous pollutants ... show an inverse relationship with PAHs as combustion conditions are altered.”).

¹⁹ 79 Fed. Reg. at 74,679/1-80/2, JA0024-25 (pulp and paper mills, chemical plants, naphthalene production, petroleum refineries, asphalt roofing production, and pesticide manufacturing).

The comments explain that controls used by refineries, pulp and paper mills, surface coating operations, chemical plants, and pesticide manufacturers to control the claimed surrogates—thermal incineration, thermal oxidization, and other combustion controls—are known to increase POM and HCB. *Id.* at 7, JA0045 (“it is well established that various POM, such as PAHs can, in fact, be generated in such high temperature environments”); 14-15, JA0052-53 (“the Agency for Toxic Substances and Disease ... has indicated that incineration can create HCB”) (citing Comments Ex. C pp.235-38, JA0074-77); Ex. A p.1, JA0056 (“such controls themselves can increase some HAP emissions while reducing others”).

The comments point out that, even if combustion controls were as effective for controlling POM and HCB as they are for controlling the claimed surrogates, combustion controls are not the only methods by which sources control POM and HCB. POM emissions often take the form of a particulate, and combustion sources (including pulp and paper recovery furnaces and lime kilns, petroleum refineries, chemical plants, and naphthalene producers) can use particulate matter controls to achieve additional reductions in POM. *Id.* at 7-12, JA0045-50. In addition, sources can and do reduce POM emissions by refraining from burning tires and making other changes to fuel inputs, and those changes will not reduce emissions of the claimed surrogates to the same extent. Supplemental Comments at 1 & Ex. A p.1, JA0079-80. Similarly, the comments note that surface coating facilities, chemical

plants, and pesticide manufacturers can reduce emissions of POM and HCB, without reducing emissions of the claimed surrogates, by altering their formulas. Comments at 6-7, 14-16, JA0044-45, 0052-54.

The comments also point out that EPA is incorrect to claim that the prior rule for large municipal waste combustors designated surrogates for POM and PCBs, because EPA expressly denied in that rulemaking that it was designating surrogates for POM or PCBs. *Id.* at 16, JA0054 (citing EPA, Response to Comments, Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Large Municipal Waste Combustors at 7-8, EPA-HQ-OAR-2005-0117-0134, JA0371-72).

C. Final Rule.

On June 3, 2015, EPA finalized the determination as proposed, 80 Fed. Reg. at 31,471/2, JA0028, reiterating its claim to have set MACT standards for sufficient sources of PCBs, HCB, and POM either directly or through a surrogate:

[T]he emission standards that collectively satisfy the 90 percent requirement under [Clean Air Act] section [7412](c)(6) were set by the EPA under two approaches: (1) Through standards that directly regulated [Clean Air Act] section [7412](c)(6) HAP; and (2) through standards that set emission limits for another HAP or compound, which serves as a surrogate for the [Clean Air Act] section [7412](c)(6) HAP.

Id. at 31,471/3, JA0028.

EPA acknowledges that this Court's *National Lime* and *Sierra Club* decisions govern surrogacy claims under § 7412(c)(6), *id.* at 31,478/3-79/1, JA0035-36, but interprets those decisions as excusing the agency from determining the degree of correlation between the § 7412(c)(6) pollutants and the purported surrogates, *id.*, even though EPA does not claim that the three-part analysis of those cases is satisfied here. The final rule does not address the degree of correlation between the § 7412(c)(6) pollutants and the purported surrogates or inquire whether use of the surrogates will identify “the best achieving sources, and what they can achieve with respect to [POM, HCB, or PCBs].” *Cf. Sierra Club*, 353 F.3d at 985.

EPA declines to respond to most of *Sierra Club*'s comments questioning the lawfulness and soundness of the surrogacy claims articulated in the proposal and then finalized as the basis for the determination. Dismissing those comments as “a belated, backdoor attack” on decades-old rules, EPA declares it has “no obligation to respond.” 80 Fed. Reg. at 31,479/3, JA0036; *id.* at 31,477/2, JA0034. According to EPA, objections to “the reasonableness of the use of a surrogate” should have been brought before EPA even claimed to be using a surrogate and are “now time barred.” *Id.* at 31,480/2-3, JA0037.

Despite disavowing any obligation to respond to comments questioning the surrogates, EPA provides a partial response to *Sierra Club*'s comments in a

response to comments document placed in the docket. EPA-HQ-OAR-2004-0505-0017, JA0091 (“RTC”). EPA defends its surrogacy claims on the ground that emissions of the § 7412(c)(6) pollutants will be “reduced” or “controlled” to an unspecified degree. *Id.* at 6, 8, 12, 19-20, 25-26, 28, JA0096, 0098, 0102, 0109-10, 0115-16, 0118.

VI. EFFECTS OF EPA’S IMPLEMENTATION OF § 7412(c)(6).

More than fifteen years after Congress required EPA to complete its obligations under § 7412(c)(6)—a statutory provision that according to EPA “is obviously intended to ensure controls for specific persistent, bioaccumulative HAP,” 76 Fed. Reg. 9457/2, JA0244—EPA has not set a single emission standard for HCB. Sources accounting for less than thirty-five percent of all POM emissions are subject to standards for POM, and sources accounting for less than fifty percent of all PCB emissions are subject to standards for PCBs. *See supra* at 18.

The result of EPA’s refusal to set standards for these pollutants is that people living in exposed communities—communities located near coke ovens, pesticide manufacturers, petroleum refineries, and other sources of the § 7412(c)(6) pollutants—are being deprived of protection that Congress “obviously” intended EPA to provide. 76 Fed. Reg. at 9457/2, JA0244.

SUMMARY OF ARGUMENT

In the determination, EPA purports to satisfy § 7412(c)(6) by claiming that pollutants for which it has already set MACT standards are “surrogates” for emissions of the § 7412(c)(6) pollutants from each source category needed to reach the 90 percent threshold. 42 U.S.C. § 7412(c)(6). EPA’s alleged surrogates are unlawful, unreasonable, and arbitrary because the agency does not even claim that they identify “the best achieving sources, and what they can achieve” with respect to the § 7412(c)(6) pollutants, as required by § 7412(d)(2)-(3) and decisions of this Court evaluating previous attempts by EPA to set § 7412 MACT standards through surrogates. *Id.* § 7412(d)(2)-(3); *Nat’l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 984; *Mossville*, 370 F.3d at 1243.

Further, EPA’s surrogacy claims are unreasonable and arbitrary because EPA has not established a sufficient correlation between the § 7412(c)(6) pollutants and its claimed surrogates. EPA has failed even to identify the pollutants it believes are correlated with the target § 7412(c)(6) pollutants for several source categories, and has failed to assess the degree of correlation for any source categories. *Mossville*, 370 F.3d at 1243. EPA failed to address record evidence that the claimed surrogates are not correlated with the § 7412(c)(6) pollutants, including evidence that combustion conditions that result in low emissions of the claimed surrogates do not necessarily result in low emissions of the target

pollutants; that some control methods used to control the claimed surrogates do not reduce emissions of the target pollutants, while others actually increase them; and that other control methods could yield easily achievable reductions in the target pollutants, without reducing the surrogates to the same extent, or even at all. *Cf. Nat'l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 984. EPA failed to respond to comments raising these issues, claiming it had “no obligation” to do so. 80 Fed. Reg. at 31,477/2, JA0034.

Instead of defending the claimed surrogates in the final rule, EPA instead seeks to set up obstacles to judicial review, claiming that challenges to the reasonableness of these surrogacy claims are time-barred and that the determination is a mere mathematical accounting. This Court rejected these same arguments in reviewing EPA’s prior claim to have satisfied § 7412(c)(6), *Sierra Club*, 699 F.3d at 533-35, and should do so again here.

STANDARD OF REVIEW

This Court reviews EPA’s construction of the Clean Air Act pursuant to *Chevron USA, Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984). Under *Chevron* step one, the question is whether “the intent of Congress is clear.” 467 U.S. at 842-43. If so, “that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Id.* Under *Chevron* step two, EPA’s interpretation of ambiguous statutory provisions

must be rejected if, among other things, “the agency has [not] offered a reasoned explanation for why it chose that interpretation,” *Vill. of Barrington, Ill. v. Surface Transp. Bd.*, 636 F.3d 650, 660 (D.C. Cir. 2011), or the interpretation “frustrate[s] the policy that Congress sought to implement,” *Shays v. FEC*, 528 F.3d 914, 925 (D.C. Cir. 2008) (internal quotation marks and citation omitted).

EPA’s action is arbitrary and capricious if the agency failed to “respond[] to significant points raised” in comments, *Sherley v. Sebelius*, 689 F.3d 776, 784 (D.C. Cir. 2012), or otherwise “failed to consider an important aspect of the problem,” *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 43 (1983); if the agency failed to “address contrary evidence in more than a cursory fashion,” *Transmission Agency of N. Cal. v. FERC*, 628 F.3d 538, 543-44 (D.C. Cir. 2010); or if the action is illogical or irrational, *Siegel v. SEC*, 592 F.3d 147, 161 (D.C. Cir. 2010).

STANDING

Environmental Petitioners have standing to bring this suit on behalf of their members. *See Friends of the Earth v. Laidlaw Env'tl. Servs. (TOC)*, 528 U.S. 167, 181 (2000). Environmental Petitioners’ members live, work, and recreate near industrial sources that, despite being listed for regulation under § 7412(c)(6) for their emissions of PCBs, HCB, and POM, are not subject to lawful emissions standards under § 7412(d)(2) or (d)(4) for their emissions of those hazardous air

pollutants. These members are exposed to emissions of PCBs, HCB, and POM from those sources, and suffer other harm including a diminished ability to engage in and enjoy recreational and aesthetic interests. *See* Declarations. EPA's determination that it has no further obligation under § 7412(c)(6) to promulgate standards for emissions of PCBs, HCB, and POM will prolong and increase the injuries sustained by these members. Vacatur of EPA's determination would require EPA to assure that the sources accounting for ninety percent of the emissions of PCB, POM, and HCB are subject to standards for these pollutants, thereby reducing Sierra Club members' exposure to these pollutants and the harms that result. *See Sierra Club*, 699 F.3d at 533.

ARGUMENT

I. EPA'S CLAIM TO HAVE SATISFIED CLEAN AIR ACT § 7412(c)(6) IS UNLAWFUL AND ARBITRARY.

Under EPA's own interpretation of § 7412(c)(6), the agency must set the following MACT standards:

1. Standards for emissions of POM from coke ovens, surface coating operations, pulp and paper mills, petroleum refineries, chemical plants, naphthalene production, asphalt roofing production, and reciprocating internal combustion engines;

2. Standards for HCB emissions from chemical plants and pesticide manufacturers; and

3. Standards for emissions of PCBs from municipal waste combustors.

76 Fed. Reg. at 9457/2, JA0244 (“[Section 7412(c)(6)] compels regulation under section [7412](d)(2) ... of the HAP for which a source category is listed.”).

EPA now claims for the first time to have set these undisputedly required standards via surrogates. 80 Fed. Reg. at 31,471/3, JA0028. As explained below, however, EPA’s surrogacy claims are unlawful and arbitrary.

A. The New Surrogacy Claims In The Determination Are Unlawful And Arbitrary.

1. EPA’s New Surrogacy Claims Rest On An Unlawful Interpretation Of The Clean Air Act.

EPA’s purported surrogates violate § 7412(d)(2) and (d)(3) and are unreasonable because they do not identify “the best performing units, and what they can achieve,” with respect to the § 7412(c)(6) pollutants. *Sierra Club*, 353 F.3d at 985. *See also Nat’l Lime*, 233 F.3d at 639; *Mossville*, 370 F.3d at 1243; 42 U.S.C. § 7412(d)(2)-(3). Indeed, EPA does not even attempt to show that the pollutants it now claims as “surrogates” comport with this Court’s holdings on the requirements for a reasonable surrogate. Instead, EPA ignores these holdings, and claims that its only obligation is to establish that regulation through surrogates will

reduce the § 7412(c)(6) pollutants to some extent—any extent at all. 80 Fed. Reg. at 31,479/1, JA0036.

The agency designates surrogates on the ground that the target pollutants will “be reduced” to some unspecified degree or will “be controlled” in some undefined sense. *See generally* RTC, JA0091. For coke ovens, aerospace coatings, petroleum refineries, asphalt coating manufacturers, and reciprocating internal combustion engines, the determination purports to designate visible emissions, organic HAP, total HAP, total hydrocarbons, and carbon monoxide, respectively, as surrogates for POM on the ground that controlling the surrogates “will reduce” POM or “includes a reduction” in POM. *Id.* at 6, 8, 20, 25-26, JA0096, 0098, 0110, 0115-16. For other surface coating operations, pulp and paper mills, chemical plants, naphthalene production, and pesticide production, the determination purports to designate total HAP and organic HAP as surrogates for POM and HCB on the ground that standards applicable to the categories “control” HAP or organic HAP emissions, “including” POM and HCB. *Id.* at 11, 15, 22-23, 28, 30, JA0101, 0105, 0112-13, 0118, 0120.

Nowhere does EPA ever claim that the standards it now seeks to repurpose as “surrogates” will reduce POM, HCB, or PCBs to the maximum achievable degree as required by § 7412(d)(2), or to the level achieved by the relevant best sources as required by § 7412(d)(3). Instead, EPA declares that the statute imposes

no obligations with respect to “the amount of emissions of each enumerated HAP that must be reduced” and that the statute is satisfied so long as the agency “identif[ies] surrogates” that “reduce” the § 7412(c)(6) pollutants to any degree. 80 Fed. Reg. at 31,479/1, JA0036. *See also id.* at 31,477/2-3, JA0034 (“The commenter argues that the EPA must ... demonstrate ... that each standard reduces HAP ‘to the extent that [7412](d)(2)-(3) requires.’ ... [Clean Air Act] section [7412](c)(6) imposes no such obligation.”) (internal alteration marks omitted).

EPA misreads its authority to use reasonable surrogates, *National Lime*, 233 F.3d at 639, as permission to set standards that do not achieve the reduction in hazardous air pollutants that the Clean Air Act requires. Section 7412(c)(6) undisputedly requires standards under § 7412(d)(2) for the § 7412(c)(6) pollutants for which the source category was listed—in this instance PCBs, POM, and HCB. 76 Fed. Reg. at 9457/2, JA0244; *Desert Citizens*, 699 F.3d 527-28. Such standards must reflect “the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section” that is “achievable” and, at a minimum, the emission level that is already being achieved by the relevant best-performing sources. 42 U.S.C. § 7412(d)(2)-(3). Thus, although EPA may use reasonable surrogates, EPA may not evade or ignore the Clean Air Act’s stringency requirements and require a lesser degree of reduction for some § 7412(c)(6)

pollutants just by choosing to regulate them via surrogate standards instead of direct standards.

It is precisely to prevent EPA from using surrogate standards in such a fashion that this Court has required EPA to demonstrate a sufficient correlation between the chosen surrogate and the target hazardous air pollutant. In *Mossville*, this Court rejected a purported surrogacy relationship because EPA had not shown which hazardous air pollutants were represented by its alleged surrogate or to what degree. 370 F.3d at 1242-43. In *National Lime* and *Sierra Club*, the Court found the challenged surrogacy relationships to be reasonable, but only because EPA had shown a correlation sufficient that the target hazardous air pollutants would be reduced to the degree that the Clean Air Act requires. *Nat'l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 984-85. Here, by insisting it can use surrogates without making any such showing—so long as the targeted hazardous air pollutants are reduced to any degree at all—EPA contravenes the plain meaning of § 7412(d) and flouts this Court's precedent.

EPA's claim of authority to set surrogate standards that do not purport to satisfy the stringency requirements of § 7412(d)(2)-(3) is also an unreasonable interpretation of the statute that must be rejected at *Chevron* step two. An interpretation that licenses the use of surrogates to avoid the stringency requirements of the statute "frustrate[s] the policy that Congress sought to

implement,” *Shays*, 528 F.3d at 925 (internal quotation marks and citation omitted), which was to limit EPA’s discretion by mandating control of hazardous air pollutants to the maximum extent achievable. *New Jersey v. EPA*, 517 F.3d 574, 578 (D.C. Cir. 2008) (quoting S. Rep. No. 101-228, at 133, *reprinted in* 5 Legislative History at 8473).

The interpretation is also unreasonable because it eviscerates the stringency requirements of the statute, depriving them “of virtually all effect” for hazardous air pollutants that EPA chooses to regulate via surrogates. *Halverson v. Slater*, 129 F.3d 180, 189 (D.C. Cir. 1997). Under EPA’s interpretation of its surrogate authority, the agency can set surrogate standards that achieve only a negligible reduction in the targeted hazardous air pollutants even when significant reductions in those pollutants are easily achievable and many sources in a category are achieving them already. If that were correct, EPA could effectively nullify the requirements of § 7412(c)(6) and § 7412(d)(2)-(3) at will just by choosing to set surrogate standards instead of direct standards, and could avoid making any significant reductions in the very pollutants that Congress singled out in § 7412(c)(6) as “pollutants of greatest concern.” S. Rep. No. 101-228, at 154-55, *reprinted in* 5 Legislative History at 8494-95.

EPA claims that this Court’s decision in *National Lime* excuses the agency from the obligation to ensure that standards set through surrogates will achieve the

maximum achievable reduction in emissions of hazardous air pollutants, 80 Fed. Reg. at 31,479/1, JA0036, and supports that interpretation with a heavily edited quotation from the decision:

where “EPA is under no obligation to achieve a particular numerical reduction in HAP ... emissions” ... “then the EPA may require control ... [of a surrogate] without quantifying the reduction in [the target] HAP thus achieved.”

Id. (quoting *Nat’l Lime*, 233 F.3d at 639).

The full holding from *National Lime*, however, demonstrates that EPA misreads the decision. Here is the full quotation, with emphasis on the language excised by EPA:

The EPA is under no obligation to achieve a particular numerical reduction in HAP metal emissions; it must reduce their emission only to the level “achieved” by the best performing facility or, for existing sources, to the level achieved by the median of the best-performing 12 percent of facilities. 42 U.S.C. § 7412(d)(3). If PM control is the only means by which facilities “achieve” reductions in HAP metal emissions, then the EPA may require PM control without quantifying the reduction in HAP metals thus achieved.

Nat’l Lime, 233 F.3d at 639. As the full quotation indicates, *National Lime* actually confirms EPA’s obligation to reduce emissions of the target hazardous air pollutants to the level required by § 7412(d)(2)-(3), even when EPA sets standards through a surrogate. *Id.* (EPA “must reduce” emissions of the target hazardous air pollutants “to the level” required by § 7412(d)(3)).

Sierra Club confirms this point, making clear that EPA can avoid achieving a “particular numerical reduction” in the targeted hazardous air pollutants only if the surrogate standard “reflect[s] what the best sources achieve—complying with Section 7412(d)(3).” 353 F.3d at 984. As this Court explained in *Sierra Club*, the “reason” for the requirements established in *National Lime* “is clear”: if EPA sets standards through a surrogate without establishing a sufficient correlation between the target and the surrogate, “the best achieving sources, and what they can achieve with respect to HAPs, might not be properly identified.” *Id.* at 985. Thus, far from excusing EPA from complying with § 7412(d)(2)-(3) when it sets standards through surrogates, the decisions on which EPA relies actually confirm the agency’s obligation to heed the statute.

EPA’s failure even to claim that its chosen surrogates identify the best performing sources, and what they can achieve, with respect to the § 7412(c)(6) pollutants, as required by § 7412(d)(2)-(3) and this Court’s decisions, is dispositive of this case. *See Mossville*, 370 F.3d at 1243 (vacating rule where EPA failed to show that its alleged use of surrogates was reasonable). Nevertheless, Petitioners proceed below to detail several specific respects in which EPA falls short of that standard here.

2. EPA Has Not Established A Correlation Between The Claimed Surrogates And The § 7412(c)(6) Pollutants.

First, EPA cannot show that its claimed surrogates identify “the best achieving sources, and what they can achieve,” *Sierra Club*, 353 F.3d at 985, because the agency has not established a correlation between the claimed surrogates and the relevant sources’ emissions of POM, PCBs, and HCB. In particular, EPA has not demonstrated “which of the [pollutants]” are correlated or “to what degree.” *Mossville*, 370 F.3d at 1243 (rejecting surrogacy claim and vacating rule).²⁰

For several source categories, EPA has not even identified the pollutants for which it believes a correlation exists. For petroleum refineries, EPA variously invokes total carbon, total organic HAP, carbon monoxide, and particulate matter, without saying which of these pollutants is correlated with POM, or to what degree. 79 Fed. Reg. at 74,679/2-3, JA0024; RTC at 19, JA0109. For pesticides manufacturing, EPA invokes total carbon, total organic HAP, hydrochloric acid,

²⁰ Under *National Lime* and *Sierra Club*, EPA must quantify the correlation between surrogate and target and assess its variability, unless the three-part analysis of those cases is satisfied. *Nat’l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 984. That three-part analysis is not satisfied here. The § 7412(c)(6) pollutants are not “invariably present in” any of EPA’s claimed surrogates, and EPA does not claim that they are. See *Nat’l Lime*, 233 F.3d at 639 (explaining that each unit of emissions of the surrogate avoided must “carr[y] within it some quantum of” the target pollutant to satisfy the “invariably present” requirement). And EPA has not satisfied the second or third requirements, as detailed below in sections I.A.3 and I.A.4.

and chlorine, without addressing the degree of correlation of any of these with HCB. 79 Fed. Reg. at 74,680/2, JA0025; RTC at 28, JA0118. The same is true for chemical plants (organic HAP, TRE index value, hydrogen halide, halogen emissions, 79 Fed. Reg. at 74,680/1, JA0025; RTC at 31, JA0121) and pulp and paper mills (total HAP and particulate matter, 79 Fed. Reg. at 74,679/2, JA0024; RTC at 16, JA0106). Because EPA has not even identified the pollutants it believes are correlated with emissions of the § 7412(c)(6) pollutants from these categories, it has failed to establish a sufficient correlation. *Mossville*, 370 F.3d at 1243 (“We cannot review under any standard the adequacy of the EPA’s correlation determination if we do not know what correlation the EPA found to exist.”).

Nor has EPA even attempted to establish the “degree” of correlation between emissions of the § 7412(c)(6) pollutants and any of the pollutants the agency now purports to designate as surrogates, as *Mossville* also requires. *Id.* This failure is particularly troubling here, in the face of record evidence that, for several of the source categories at issue, EPA’s claimed surrogates are not correlated with, or may even correlate inversely with, the § 7412(c)(6) pollutants.

For example, the record shows that the combustion conditions that result in low emissions of the claimed surrogates from refineries, pulp and paper mills, chemical plants, asphalt roofing manufacturing, and reciprocating internal combustion engines do not necessarily result in low emissions of the target

§ 7412(c)(6) pollutants. “[D]ifferent combustion conditions” at combustion sources “actually favor different emissions.” Comments at 8, 10-11, 13 & Ex. A pp.5-9 & Ex. B, JA0046, 0048-49, 0051, 0060-64, 0066. Indeed, the main constituent of several of the surrogates EPA claims to have identified for the combustion sources—gaseous organic pollutants—actually “show[s] an inverse relationship with PAHs as combustion conditions are altered.” *Id.* at 13 & Ex. A p.8, JA0051, 0063; *id.* at 8, JA0046 (“total HAP and total organic HAP from [combustion] sources are mostly gases”). Although Sierra Club raised this issue in its comments on the proposed rule, EPA did not respond.

EPA’s surrogacy claims are unlawful and arbitrary in light of EPA’s failure to establish “which of the [pollutants]” are correlated or “to what degree,” *Mossville*, 370 F.3d at 1243. And EPA’s failure to show a correlation between the § 7412(c)(6) pollutants and the claimed surrogates confirms that EPA has not shown that the claimed surrogates will identify “the best achieving sources, and what they can achieve” with respect to the § 7412(c)(6) pollutants. *Sierra Club*, 353 F.3d at 985. In addition, EPA’s “failure to respond to contrary arguments” “epitomizes arbitrary and capricious decisionmaking.” *Ill. Pub. Telecomm. Ass’n v. FCC*, 123 F.3d 693, 694 (D.C. Cir. 1997).

Further, as detailed in the next two sections below, many of the control methods used by the relevant sources do not reduce emissions of the § 7412(c)(6)

pollutants, or reduce them far less than direct standards would. Other commonly used control methods are known to increase emissions of the target § 7412(c)(6) pollutants. For this reason also, EPA has failed to establish a sufficient correlation between the claimed surrogates and the § 7412(c)(6) pollutants.

3. Controls For The Claimed Surrogates Do Not Indiscriminately Capture The Target Pollutant.

EPA's claimed surrogates also fail to identify the best performers, or what they can achieve, with respect to the § 7412(c)(6) pollutants because the controls available to these sources do not control the § 7412(c)(6) pollutants and the claimed surrogates "indiscriminately," as required by this Court's decisions. *Nat'l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 985. Sources can and do reduce the purported surrogates while reducing the § 7412(c)(6) pollutants far less, or not at all. In addition, for several of the source categories at issue, EPA failed to address record evidence showing that methods to control the purported surrogates actually increase emissions of POM and HCB.

For six source categories, EPA claimed in the proposed rule that combustion controls reduce POM and HCB "indiscriminately" or "equally" with all other

pollutants.²¹ This claim is arbitrary because the administrative record contains no evidence supporting it. Indeed, when it adopted the rule for many of these combustion sources, EPA itself admitted that the control devices employed by those sources do not control the hazardous air pollutants indiscriminately, but rather achieve different levels of control for different hazardous air pollutants. Comments at 12, JA0050 (quoting 59 Fed. Reg. at 19,420/3, JA0160 (rule setting standards for hazardous organic emissions from various source categories)). And in the final rule, far from defending the “equal[]” control claims it made in the proposal, EPA abandons those claims and asserts only that controls for these and other sources will reduce POM and HCB to an unspecified, indeterminate degree. *Supra* at 32, 38.

Further, standards for several of the sources at issue authorize the use of alternative control methods that EPA does not claim will reduce the § 7412(c)(6) pollutants at all, let alone do so “indiscriminately.” These include, for pulp and paper mills, the compliance option of simply routing emissions to a boiler, RTC at 15, JA0105; and for refineries, the compliance options of routing pollution to a boiler or a flare, 40 C.F.R. § 63.1566(b)(5)(ii); RTC at 17 n.42, JA0107, or

²¹ 79 Fed Reg. at 74,679/1-80/2, JA0024-25 (pulp and paper mills, chemical plants, naphthalene production, petroleum refineries, asphalt roofing production, and pesticide manufacturing).

electing to comply with an alternative limit on emissions of nickel, 40 C.F.R.

§ 63.1564(a)(1)(v). Even after commenters pointed out that there is no evidence that the alternative methods for reducing the claimed surrogates reduce emissions of the § 7412(c)(6) pollutants, Comments at 10, JA0048, the final rule still did not address this issue.

For coke ovens, the record shows that the technology frequently used to control the claimed surrogate is particulate control, which will not yield any reduction in the gaseous POM that coke ovens emit. Comments Ex. A p.2, JA0057. EPA failed to address this issue at all in the final rule. *See* RTC at 6, JA0096 (simply repeating claim that particulates will be reduced).

The record further shows that regenerative thermal oxidizers (“RTOs”), thermal incineration, and other combustion controls used by refineries, pulp and paper mills, chemical plants, surface coating operations, and asphalt roofing are known to increase both POM and HCB as they reduce the claimed surrogates. *Supra* at 29. EPA concedes in the response to comments that “thermal oxidizers that are set up to reduce HAP can actually increase POM emissions,” RTC at 12, JA0102, but does not otherwise address this problem with its surrogacy claims.²²

²² Even though RTOs are used as a control device in many of the industries covered by the rule, EPA offers a response only with respect to non-aerospace surface coatings, claiming that “only a few” surface coating operations route fugitive emissions to a combustion device that will increase POM. RTC at 12,

EPA fails to address in any way the comments showing that thermal oxidation by chemical plants and pesticide manufacturers may increase HCB as it reduces other hazardous pollutants. RTC at 27-28, 30-31, JA0117-18, 0120-21.

4. Controlling The Claimed Surrogates Is Not The “Only Means” By Which Sources Achieve Reductions in the § 7412(c)(6) Pollutants.

EPA’s claimed surrogates are also unlawful and arbitrary because controlling those pollutants is not the “only means” by which sources achieve reductions in the § 7412(c)(6) pollutants. *Sierra Club*, 353 F.3d at 985.

The record shows that coke ovens could use carbon adsorption to achieve reductions in gaseous POM, but have no incentive to do so if they are only required to control visible emissions. Comments Ex. A pp.2-3, JA0057-58. EPA did not address this issue at all.

JA0102. This is no answer, because EPA is not empowered to adopt a surrogate that is unreasonable as to any sources. *Sierra Club*, 353 F.3d at 985 (methods that indiscriminately control the target and the surrogate must be the “only means” for control of the target). EPA also claims that “reductions from RTOs are expected to [*sic*] at least comparable to” reductions from switching to a more-efficient spray gun, but does not specify whether it is claiming “reductions” in POM from RTOs or only reductions in overall pollution. RTC at 12, JA0102. If the former, EPA does not explain how that can be true given that EPA agrees that RTOs may increase POM. EPA’s reasoning “is internally inconsistent and therefore arbitrary.” *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1153 (D.C. Cir. 2011). If the latter, EPA’s claim is irrelevant with respect to its statutory obligation to ensure that POM emissions are reduced to the greatest achievable degree.

The record also shows that combustion sources like pulp and paper mills, chemical plants, and naphthalene production can and do reduce POM emissions by altering the fuel inputs into their combustion processes. Supplemental Comments at 1, JA0079. For example, combustion sources such as paper mills which currently burn tires could achieve dramatic reductions in POM by not burning tires. *Id.* EPA did not address this flaw in its claimed surrogacy determinations at all.

Further, chemical plants and pesticide manufacturers can reduce emissions of § 7412(c)(6) pollutants by altering their formulas to reduce or eliminate HCB. Comments at 14-15, JA0052-53. EPA did not address this issue either.

The same goes for surface coating operations: they can reduce their emissions of POM by using POM-free formulas, and EPA concedes that many have done so already. RTC at 8, JA0098 (“There are currently naphthalene-free coatings and ... some coating sectors have transitioned to naphthalene-free coating formulas”). This obviously “achievable” emissions reduction, however, may not be secured if these operations are required only to achieve reductions in their total HAP.

Another problem with EPA’s surrogacy claims is that POM from several of these sources is mainly in particulate form, *id.* at 16, 19, JA0106, 0109 (agreeing that POM from pulp and paper mills and refineries is a particulate), while the surrogates for these sources are composed mainly of gases. Comments at 9-10,

JA0047-48. Coke ovens, pulp and paper mills, petroleum refineries, chemical plants, naphthalene producers, asphalt roofing producers, and reciprocating internal combustion engines could address their particulate POM emissions using particulate controls like baghouses and electrostatic precipitators. *Id.* at 8, 10-12, JA0046, 0048-50. But those controls will not be required, or even identified, under a MACT approach focused on a surrogate that is mainly or entirely gaseous.

EPA effectively concedes this point in the response to comments when it invokes particulate matter limits that apply to certain processes at two of the source categories—pulp and paper mills and refineries—in an apparent attempt to bolster the surrogacy claims for those two sources. For the remaining sources, the final rule simply ignores this problem, and this is arbitrary. *Ill. Pub. Telecomm.*, 123 F.3d at 694 (“failure to respond to contrary arguments” “epitomizes arbitrary and capricious decisionmaking.”).

For pulp and paper mills and refineries, the existence of particulate matter limits for some processes does not lend any support to EPA’s claim that other pollutants—specifically, organic HAP or organic carbon—are valid surrogates for POM. EPA does not claim that particulate matter itself is a surrogate for the § 7412(c)(6) pollutants, or attempt to support such a claim. If EPA were to claim particulate matter as a surrogate, EPA would have to address this Court’s

“established[] three-part analysis” for determining whether particulate matter is a valid surrogate, *Sierra Club*, 353 F.3d at 984, but EPA has not.²³

EPA does not claim that any of the foregoing “other means” of reducing the target § 7412(c)(6) pollutants would affect the surrogate “in the same fashion,” as EPA “must.” *Nat’l Lime*, 233 F.3d at 639; *Sierra Club*, 353 F.3d at 985.

Specifically, EPA does not claim that using carbon adsorption at coke ovens would reduce visible emissions, that altering the fuel inputs into combustion processes would reduce the various surrogates identified for those sources, that reformulating pesticides and other chemicals to reduce or eliminate HCB would reduce other organic HAP, that reformulating surface coatings to reduce or eliminate naphthalene would reduce total HAP in the same fashion, or that employing

²³ In any event, both EPA’s response and the underlying rules show that only some of the POM-emitting processes at these facilities are subject to particulate matter limits. For refineries, EPA claims only that certain catalytic cracking units are subject to particulate matter limits, and EPA says these units represent only thirty percent of refinery POM emissions. RTC at 19, JA0109. The standard for these units actually authorizes them to comply via an alternative limit on nickel, 40 C.F.R. § 63.1564(a)(1)(v), which EPA does not claim is correlated to POM in any way. Other sources of POM at refineries are exempt from particulate matter limits if they route their emissions to a combustion device or flare, 40 C.F.R. §§ 63.164(h), (g), .165(c), .170, which are known to increase POM emissions, as described above. For pulp and paper mills, EPA claims only that furnaces and kilns at those sources are subject to particulate matter limits. RTC at 16, JA0106. Further, those sources are authorized to route their particulate matter emissions to a boiler or thermal oxidizer, *id.* at 15, JA0105; 40 C.F.R. § 63.443(d), which can increase POM, *supra* at 29, and those secondary combustion units are not subject to particulate matter limits under the rule. 40 C.F.R. § 63.860(b).

particulate matter controls to reduce POM would reduce non-particulate matter surrogates. EPA therefore has not shown that “the best achieving sources, and what they can achieve with respect to [the target] HAPs,” will be properly identified through use of the claimed surrogates. *Sierra Club*, 353 F.3d at 985.

5. The Determination’s Surrogacy Claims Are Unlawful And Arbitrary Because EPA Refused To Address Comments Questioning Their Lawfulness And Soundness.

Although Sierra Club raised each of the above issues in comments submitted to the agency, EPA failed to address any of them, with the exceptions noted above. For that reason too, the determination is unlawful and arbitrary and capricious. 5 U.S.C. § 553(c); *Sherley*, 689 F.3d at 784 (failure to respond to significant comments renders action arbitrary and capricious “insofar as it demonstrates that the agency’s decision was not based on a consideration of the relevant factors.”).

B. EPA’s Rule For Municipal Waste Combustors Did Not Set MACT Standards For Emissions Of POM Or PCBs, Either Directly Or Through A Surrogate.

EPA claims to have designated surrogates for the § 7412(c)(6) pollutants in a prior rule for only one source category at issue here—large MWC. Specifically, EPA claims it concluded in 2005 that carbon monoxide and dioxin/furans are surrogates for those sources’ emissions of POM and PCBs. 79 Fed. Reg. at 74,678/1, JA0023 (citing 70 Fed. Reg. at 75,356/1-2, JA0218). In fact, although

the 2005 MWC rule claimed that POM and PCB emissions would be incidentally reduced, it did not purport to set MACT standards for POM or PCBs, directly or through surrogates. 70 Fed. Reg. at 75,356/1-2, JA0218. Further, in response to comments on that rule, EPA unequivocally denied that it was setting surrogate standards for POM or PCBs: “EPA did not purport to use other pollutants emitted by large MWC as surrogates for PCB and POM.” Comments at 16, JA0054 (quoting Response to Comments, Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Large Municipal Waste Combustors at 7-8, JA0371-72). EPA is therefore wrong when it claims that the 2005 rule for large MWC designated surrogates for those sources’ emissions of POM and PCBs. EPA cannot rest its claim to have satisfied § 7412(c)(6) on a surrogacy determination it has never made.

EPA’s claim that these surrogacy designations were made and explained already is also illogical and arbitrary. EPA fails to acknowledge, even when confronted with its own words, that the 2005 rule in fact did not set standards for POM or PCBs, directly or through a surrogate. *See Siegel*, 592 F.3d at 161 (agency decision “must be logical and rational”); *Rio Grande Pipeline Co. v. FERC*, 178 F.3d 533, 543 (D.C. Cir. 1999) (vacating agency orders that “defy good reason”).

Because large MWCs are responsible for an estimated 51 percent of total nationwide emissions of PCBs, *supra* at 15, EPA’s failure to set standards for those

emissions, either directly or through surrogates, is itself a sufficient basis for rejecting EPA's claim to have satisfied the 90-percent requirement of § 7412(c)(6).

II. EPA'S OTHER ARGUMENTS LACK MERIT.

A. This Challenge To The Determination Is Timely.

EPA claims in the final rule that it has “no obligation” to address comments questioning its surrogacy claims, and suggests that legal challenges to its attempt to retroactively designate surrogates for the § 7412(c)(6) pollutants are time-barred. 80 Fed. Reg. at 31,480/1-2, JA0037. EPA made the same argument in the challenge to its previous claim to have completed its obligations under § 7412(c)(6). *Compare* Respondents' Brief at 29, JA0140, *and Sierra Club*, 699 F.3d 530 (“Sierra Club's argument should have been raised in timely, direct challenges to [prior] rules [and] ... may not be made in this belated, backdoor attack”), *with* 80 Fed. Reg. 31,479/3, JA0036 (“the proposed notice does not support a belated, backdoor attack on [prior] rules”).

As this Court held in rejecting this argument four years ago, it misconceives Petitioners' complaint:

Sierra Club's contention here is that EPA's previous rulemakings do not satisfy the agency's obligations under § [7412](c)(6) in part because some of these previous regulations did not, on their face, purport to carry out that paragraph's demands. Sierra Club claims that, with the Determination, EPA is unlawfully shoehorning previous rulemakings into the service of its argument that it had completed its obligations under § [7412](c)(6). If Sierra Club is correct ... the

agency action Sierra Club challenges is only the Determination, which (in its view) repurposed previous rulemakings to satisfy EPA's § [7412](c)(6) obligations.

Sierra Club, 699 F.3d at 534.

As in *Sierra Club*, Petitioners' argument is that EPA's surrogacy claims "unlawfully shoehorn[] previous rulemakings into the service of its argument that it ha[s] completed its obligations." *Id.* Petitioners' challenge to EPA's surrogacy claims "is not only timely," but "could not have been brought at all" until EPA made the surrogacy claims. *Id.*

B. EPA Must Consider Comments Questioning The Determination.

EPA attempts to justify its refusal to consider comments on the proposed surrogacy determinations by claiming the determination is a "simple ... accounting" that only "explain[s] in mathematical terms" that sufficient standards exist already. 80 Fed. Reg. 31,479/3, JA0036. This too is an argument EPA made, and this Court rejected, in *Sierra Club*. *See* Respondents' Brief at 50-51, 54, JA0150-51, 0154 (arguing EPA had no obligation to provide notice or take public comment because the determination was nothing more than a mathematical "accounting" that "left the world just as it found it.").

The Determination is not merely a mathematical accounting. Because no previously issued rules for the source categories at issue here purport to set MACT standards for the § 7412(c)(6) pollutants or designate surrogates for them, EPA

identifies the claimed surrogates in the proposed rule, 79 Fed. Reg. at 74,678/1, JA0023; “explain[s]” there how the chosen surrogates “are reasonable,” *id.*; and then finalizes the determination on the basis of those surrogacy claims, 80 Fed. Reg. at 31,471/3, JA0028. Just as in *Sierra Club*, the Determination “tread[s] new ground by taking previous rulemakings—which EPA had promulgated without any evident goal of satisfying its § [7412](c)(6) obligations—and repurposing them” as standards for the § 7412(c)(6) pollutants. *Sierra Club*, 699 F.3d at 535. This is final action “subject to [5 U.S.C.] § 553’s notice-and-comment requirements.” *Id.*

CONCLUSION

For the foregoing reasons, Petitioners respectfully request that the Court vacate the determination.

DATED: July 29, 2016

Respectfully submitted,

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CERTIFICATE REGARDING WORD LIMITATION

Counsel hereby certifies, in accordance with Federal Rule of Appellate Procedure 32(a)(7)(C), that the foregoing **Final Opening Brief of Petitioners** contains 12,944 words, as counted by counsel's word processing system, and thus complies with the applicable word limit established by the Court.

DATED: July 29, 2016

/s/Neil Gormley
Neil Gormley

CERTIFICATE OF SERVICE

I hereby certify that on this 29th day of July, 2016, I have served the foregoing **Final Opening Brief of Petitioners** on all registered counsel through the Court's electronic filing system (ECF).

/s/Neil Gormley
Neil Gormley